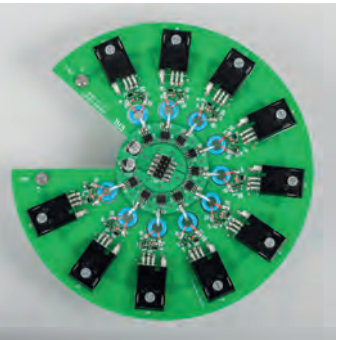
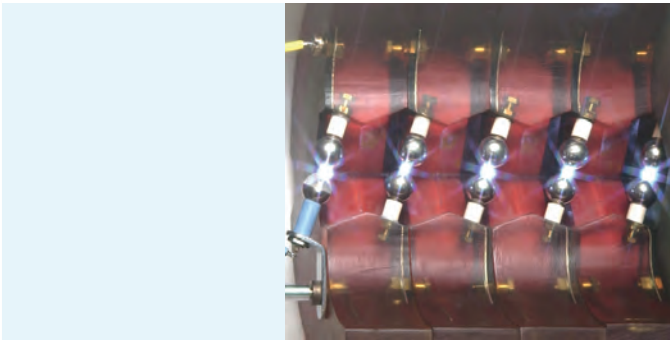


Workshop on Switches for Pulsed Power Applications

02-03 March 2020

ISL - French-German Research
Institute of Saint-Louis
Saint-Louis, FR

Programme



Programme

Monday, 02 March 2020

11h30 Registration desk opens (if applicable: please buy lunch & dinner tickets here)
Lunch at the ISL cantina (10 €)

13h00 Welcome

E. Spahn – Chairman of the International Society of Pulsed Power Applications e.V.
M. Schneider – Head of Division III “Laser & Electromagnetic Technologies”
O. Liebfried – Workshop organization

13h20 Session I

Development of fast semiconductor HV switching modules based on COTS components
> *R. Bischoff (ISL - French-German Research Institute of Saint-Louis)*
Parallelizing thyristors in a switch assembly for an inductive pulsed power generator
> *V. Brommer (ISL - French-German Research Institute of Saint-Louis)*
Development and Application of Switches and Related Circuits at KIT
> *M. Sack (KIT - Karlsruhe Institute of Technology)*
A high-voltage pulsed power modulator for fast-rising arbitrary waveforms
> *M. Hochberg (KIT - Karlsruhe Institute of Technology)*

15h00 Group photo

15h05 Coffee break

15h30 Session II

Development of spark-gap switches at Eindhoven University of Technology: gas, liquid and supercritical switches
> *T. Huiskamp (Eindhoven University of Technology)*
High voltage, high current ball gap switch development at First Light Fusion
> *P. Holligan (First Light Fusion Ltd.)*
Waveform control for radar and EMC applications using optoelectronic switches
> *J. Hyvernaud (XLIM)*
Electrical discharges used as acoustic waveform generators
> *P. Delmote (ISL - French-German Research Institute of Saint-Louis)*

17h10 End of session II

19h00 Dinner at Restaurant Carré Comptoir at Hotel Ibis (35 € - free for ISP members)

Tuesday, 03 March 2020

09h00 Session III

Semiconductor opening switches: SOS diodes and its pulsed power applications

> *A. Gusev (University of Pau)*

Common Issues about Voltage and Current Balancing

> *M. Osemann (RI Research Instruments GmbH)*

ISLs pulsed power semiconductor device technology – Innovative electronic devices based on silicon carbide

> *R. Hassdorf (ISL - French-German Research Institute of Saint-Louis)*

Semiconductor closing switches: thyristors triggered in impact-ionization wave mode

> *A. Gusev (University of Pau)*

10h40 Coffee break

11h00 Session IV

Switch requirements for pulsed power applications at FAIR

> *I. Petzenhauser (GSI Helmholtzzentrum für Schwerionenforschung GmbH)*

Overview of pulse generator developments at CERN for thyatron replacement and new projects

> *T. Kramer (CERN)*

Thyatron switches at CERN

> *A. Ferrero Colomo (CERN)*

The LBDS thyristor stack upgrade and future perspectives

> *V. Senaj (CERN)*

12h40 Lunch at ISL cantina (10 €)

14h00 ISP member meeting

15h30 Lab tour

Side Event - Carnival

“Scheibenschlagen” (disk flinging)

The alemannic fasnacht ends on Sunday March 1 with the tradition of “Scheibenschlagen” (disk flinging). On the occasion of this event, large bonfires will be lit and glowing wooden disks are flung from a long hazelnut stick off a mountain side into the valley below. All necessary means, warm food and drinks will be provided on-site by the organizers of the bon fires (i.e. local volunteer fire department). Weatherproof clothing is a requirement. Note that clothes will be smoked and the ground can be muddy!

We will meet at the ISL and drive to the central parking place of Istein (47°39'37.1"N 7°32'16.3"E). From there we will climb the Isteiner Klotz (1.1 km, 92 m high).



Meeting place: Parking place of the French-German Research Institute

Meeting time: 17 o'clock

Requirements: Weatherproof clothing
Cash for self-supply

“Morgenstraich”

Carnival of Basel begins with the “Morgenstraich” at exactly 4 o'clock in the morning of March 2. Participants are self-responsible for the visit. However, we propose to meet in front of Hotel Berlioz. We will take the train at 2h37 from the train station to Basel SBB.

Meeting place: In front of Hotel Berlioz

Meeting time: 2h15 o'clock in the morning

Requirements: Warm clothing
Self-supplies
Money for public transport
Cash for the fasnacht badge (CHF 9, 18 or 45)
€ is mostly accepted by ratio 1:1



Carnival of Basel

In the end of the workshop you might experience the Carnival of Basel with us. After you had a rest, we would meet at the train station of Saint-Louis to go to Basel again.

We are planning to walk the old town including the lantern exhibition at the Münsterplatz before we settle in front of any of the stages to watch the Gugge music concerts. Those concerts end at 23 o'clock.

Meeting place: Main train station of Saint-Louis

Meeting time: 18 o'clock

Requirements: Self-supplies
Cash in CHF



Public transport to Basel

Special connection for the Morgenstraich

Tram 3 from Gare de Saint-Louis to Barfüsserplatz at **2h56**

Train from Gare de Saint-Louis to Basel SBB train station at **2h37**

Special train ticket for Morgenstraich: To-and-return ticket: **5 €**.

The return trip must be made on the same day, by the train of your choice.

These tickets are on sale at ticket machines in the "Event fares (Tarifs événementiels)" section.

Regular connections

TRAM 3 (20 minutes trip)

	Gare de Saint-Louis -> Basel Barfüsserplatz	Basel Barfüsserplatz -> Gare de Saint-Louis
Hour	Minutes	Minutes
4	55	-
5	25; 47	20; 35; 50
6 - 19	02; 17; 32; 47	05; 20; 35; 50
20 - 23	11; 41	06; 36
0	-	06

Single Ticket : Tarif Inflex 2.80 € / CHF 3.10

Multiticket (6 single tickets): Tarif Inflex MFK

Attention: Ticket only valid until Barfüsserplatz. Going to Basel SBB requires a ticket for 4 €.

Further information at www.bvzb.ch

TRAIN (8 minutes trip)

	St-Louis -> Basel SBB	Basel SBB -> St-Louis
Hour	Minutes	Minutes
5		21; 37
6-8	00; 12; 30 or 31; 42	08; 21; 38 or 39; 51
9	00; 30; 42	08; 21
10	00	21; 39
11	00; 12; 42	21; 38
12 - 13	00; 42 or 44	21; 38 or 39
14	00; 42	21
15	00	21; 38; 51
16 - 19	00; 12; 30 or 31; 42	08; 21; 38 or 39; 51
20	00; 12; 42	21; 38
21	00	38
22	30	38
23	14	38 (by bus)

Tarif normal: 2,80 €

Further information at <https://www.ter.sncf.com>

Meeting dinner

We would like to continue our discussions in a relaxed atmosphere, therefore we have organised a dinner at 19 o'clock at the restaurant "Le Carré Comptoir - Hôtel Ibis" (you can find the address below).*



Menu

- ◆ Onion Tart
- ◆ Chicken thigh in Riesling wine, carrots and knoepflé
- ◆ Chocolate fondant and vanilla ice cream

The menu includes Alsace wine, mineral water and coffee/tee.

Please note that all beverages ordered beside to those on the table have to be paid extra to the service staff.

* Please inform us of any special diet as soon as possible

